SHOEMAKER (Geo. E.)

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WITH A REPORT OF TEN CASES.

BY

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CELIOTOMY UNDER UNUSUAL CONDITIONS.

With a Report of Ten Cases.[1]

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I DESIRE to give some practical illustration of the problems that confront the abdominal surgeon and to present some cases of widely differing type, selected for purposes of illustration. All the cases reported recovered from operation. All are living except one, who lived a year and a half and died of facial erysipelas.

The first case represents some of the later developments of neglected pelvic inflammation and their final cure by operation.

CASE I. *Hydronephrosis from obliterated ureter; pyosalpinx and ovarian abscess surrounding the vermiform appendix; catheterization of ureter.*—E. L. P., aged thirty-five years, of good heredity, was married nine years, and had three children and one miscarriage. Her first labor, seven years ago, appears to have been followed by sepsis, since which she has had numerous attacks of pelvic inflammation, usually starting as severe pain in the right ovarian region, and centering around the umbilicus. These attacks have increased in severity and frequency during the past three years, resulting in practical invalidism. The last attack, having lasted about five weeks, brought her to the Methodist Hospital, where

[1] Read before the Philadelphia County Medical Society, April 11, 1894.

she presented a deplorable picture, emaciated, vomiting green, and at times bloody, bile-stained fluid; a large undermining bedsore over the sacrum; the tissues sloughing to the bone; irregular temperature to 101°; leaky skin and thready pulse. The abdomen was tympanitic and extremely tender, a semifluid mass filling the right half of the pelvis.

More than three weeks were consumed in the careful preparation for operation, by unloading the bowels, improving the stomach and securing a better appearance of the sloughing bedsore, which last was a representation of the general condition. Just here, I may say, that there is a golden time to operate, and careful observation alone will determine it in some of these desperate cases. It is not always as soon as the diagnosis is made.

I am convinced that it is wiser in acute peritonitis, when the case appears to have *already reached a standstill*, and when pus is not known to be present, to operate after the acute symptoms have subsided, if the condition of the patient warrants waiting. Also, in some profoundly septic conditions such as this, I am sure that I have saved life by waiting day by day, until by cleanliness and careful nursing a retentive stomach and a better tone have been obtained. In other words, it is safer to nurse an almost moribund patient a little if previous care has been wanting. This is not to be mistaken for an advocacy of delay after hemorrhage, or in progressive cases, such as acute suppurative appendicitis.

Operation, November 21, 1893. Everything in the pelvis was adherent by thoroughly organized adhesions to a mass which afterward proved to be the right tube and ovary riddled with abscesses and surrounded by hyperplastic tissue. The cecum was with difficulty freed down to the vermiform appendix, which passed directly into the inflammatory mass and was surrounded by it. The appendix was ligated off at two points, and came away afterward with the mass. When afterward

dissected out it appeared healthy. The exudate appeared to pass behind the peritoneum at the outer border of the iliac muscle, and a tough prolongation was here ligated off. Thick, green, highly offensive pus, several ounces in quantity, escaped from the largest ovarian sac deep in the pelvis; but as a continuous stream of hot water was led to this point by the irrigation-nozzle, and kept constantly flowing out of the wound during the remainder of the operation, no harm was done. Thick pus does not readily mix with water, and may be carried along bodily by a heavy stream. The left tube and ovary were allowed to remain, as they appeared to contain no pus. The right kidney-region contained a large thin-walled cystic tumor, with a rounded lower end, flattened in alongside the spine, apparently a hydronephrosis. There was not a sign of inflammation about the mass, and no adhesion existed over it. It was decided not to open it then through the loin, as from its contiguity the bedsore would surely infect the wound. The fluid was considered not to be pus, because no adhesions of surrounding viscera overlaid the sac.

The patient made an excellent recovery from the operation, and looked better from the first. The temperature touched 100° on the third day for the only time. A glass drainage-tube was employed.

The question as to the proper disposition of the hydronephrosis still remained after recovery from the celiotomy. One month later the woman was free from pain, was going about the ward, had gained greatly in flesh, and had a good appetite, but the kidney-swelling was unchanged. She was now etherized, put in the Trendelenburg position, to allow the distention of the bladder with air, after the method of Dr. H. A. Kelly, and the orifices of the ureters exposed after dilatation of the urethra.

I demonstrated to my own satisfaction that no urine was coming through the right ureter, which had apparently been occluded by the unusually dense inflamma-

tory infiltration that had previously existed. It was determined not to incise the sac, for if the ureter were obliterated a permanent fistula in the loin would result, while there was every probability of atrophy of the kidney occurring if nothing were done. Five months have now elapsed, the sac in the loin is with difficulty recognized, and the patient suffers no pain. Urinary examination was negative, and the quantity of urine, diminished for a few weeks after the celiotomy, became normal and remained so.

A letter received from the patient to-day expresses her great satisfaction over her restored health. She feels better than for ten years, and has gained twelve pounds over the highest weight of seven years. She was not weighed when emaciated by sepsis.

The relatively small abscess in the abdomen, limited by adhesions, and which can be opened and drained with safety to the patient, is a condition common enough.

It is very rare, however, to see recovery follow when the pus has been diffused from diaphragm to pubis and across the full width of the abdomen, as in the following case of obscure but probably tuberculous origin. As recovery followed, a tuberculous cause is made probable, for septic cases of this extent *never get well.*

Case II. *Recovery from diffuse purulent peritonitis, probably tuberculous.*—Miss A. S., aged twenty-two years, was previously healthy. She was tall, active, and well-formed, and weighed 160 pounds. Her mother died of pulmonary tuberculosis. While menstruating the patient had an attack of so-called *la grippe*, and five days later thoroughly chilled herself by a cold bath, going to bed with a severe chill, followed by fever. Before rising the next morning there was sudden very severe general abdominal pain. Tympany and great general tenderness followed, with wiry pulse, dry tongue, and other signs of acute peritonitis. After a week of treatment, mainly by opium, at the hands of her physician, the woman was

sent to the medical wards of the Methodist Hospital under the charge of Dr. J. H. Lloyd, who asked me to see her. It was now about two weeks since her illness began and one week since the pain started. The temperature was not irregular, and ranged from 101° to 102°. The eyes were abnormally bright; the cheeks flushed, the mind very clear; the abdomen universally tender and much distended. No tumor was discoverable. There were no signs of extra-uterine pregnancy. The uterus was small and moderately fixed, the vaginal fornices somewhat resistant, as though loose clot occupied the peritoneal cavity. Rectal examination showed a general fulness behind the uterus, but nothing suggesting a sac or tumor. At this time there was doubtful dulness in the flanks, which could not be confirmed later.

Pain and temperature improved slightly for two weeks, but the woman lost flesh. At the end of that time, four weeks after the onset, fluid could for the first time be positively demonstrated lying high up on the left side. The vaginal vault was now hard, and nothing could be determined from below. The fluid rapidly accumulated during the following week, distending the left side of the abdomen to the ribs; the pulse, temperature, and general appearance of the patient suggested the presence of pus, and she was now placed entirely in my charge. Operation six weeks after the onset of the disease revealed the following remarkable condition: The entire peritoneal cavity was lined by smooth, purplish, easily bleeding false membrane, and contained four pints of yellow, thin pus, with several ounces of pultaceous, yellow masses of purulent lymph resembling omelet in appearance. These masses were easily broken up, but ran out of the wound in irregular lumps many of which would have filled a tablespoon.

No intestines were to be seen; they were completely collapsed and occupied the hollows on either side of the

spine in the upper abdomen and the region just over the insertion of the mesentery below, being completely covered by the single smooth sheet of false membrane. The hand was passed into the abdomen and the whole abdomen explored from the diaphragm to the bottom of Douglas' sac for granular surfaces of tuberculosis or for thickening or enlargement, to indicate the origin of the disease, but without result. The kidneys could not be separately outlined, being covered by collapsed intestine, but inasmuch as everything in the abdomen hugged the spine and posterior wall very closely, any enlargement would have been detected.

The region of the appendix yielded no light, though carefully explored. The ovaries, tubes, and uterus were free behind and easily outlined, as they lay plastered forward against the base of the bladder. The hand could be passed to the bottom of Douglas' sac and over the sacral surfaces. The slightest manipulation caused oozing of the surfaces of the peritoneum, which appeared greatly thickened, but contained no millet-seed nodules and showed no adhesions. A thorough toilet of the cavity was made, many gallons of hot, filtered, and boiled water being passed through, the fingers carefully dislodging lymph. Glass drainage was used, followed by a gradually shortened rubber tube, for five weeks. The discharge from the tube, while it contained some pus, was never offensive. The wound, being carefully washed with hydrogen dioxid frequently, healed rapidly. In the third week, after carefully sterilizing the glass drainage-tube to prevent inoculation with superficial discharges, eight ounces of warm Thiersch's solution were on each of two occasions allowed to flow into the abdomen under eighteen inches of hydrostatic pressure. This failed to dislodge any pus and returned quite clear, so the washing was not repeated. The patient improved very rapidly; put on many pounds of flesh; is without pain or tenderness, and the site of the drainage-

tube is closed. Seven months after the operation she reported herself as well.

Through the courtesy of Dr. Riesman cultures were made for tubercle-bacilli from the pus obtained, but without result. A careful examination of a piece of the thickened parietal peritoneum removed at the edge of the abdominal wound also failed to show tubercle-bacilli. I am assured, however, by a pathologist that this evidence is not conclusive of the non-tuberculous character of the process. My own impression is that the origin was tuberculous, possibly in a kidney; that the fluid originally was ascitic and that it became purulent shortly before the operation. Negatively, I know of no case of universal purulent peritonitis of long standing in which the patient has recovered if the source of the pus was due to ordinary infection, as from the bacterium coli commune or the staphylococcus pyogenes aureus. The relation to the kidney is suggested by the fact that during convalescence pus without casts has at times appeared in the patient's urine, and by the fact that she has stated that she long has given up the wearing of corsets because pressure over the region of the right kidney in the flank caused occasional discomfort. At all events, she now looks and feels well.

The following case is the only one in my experience in which perfectly normal tubes and ovaries have been removed except for fibroid tumor. The object was the cure of well-marked epilepsy of decided menstrual type. The patient remains well physically, but the improvement in the epilepsy was only temporary, and now, three years later, her condition is even worse. The case deserves to go on record as a failure, and serves still further to confirm the opinion now held by most neurologists, that in true epilepsy no permanent benefit is to be derived from an artificial menopause if no disease of the reproductive organs exists. This opinion was held at the time of operation; but three years' previous

observation, and a record of every attack for one and a half years, showed the truth of the patient's statement that the epileptic attacks grouped themselves about her periods, had begun at puberty, and had been absent for two or three months at a time when her periods chanced to be absent. She was also confirmed in self-abuse, was not to be trusted with unscrupulous men, and her mind was becoming dull. She had for three years been confined in a home for incurables. The operation was the earnest desire of herself and friends, but was refused until a long trial of medical treatment proved of no avail in improving her condition.

These statements are made because I feel that operations upon the normal genitalia call for very distinct justification in each case. The history was as follows:

CASE III. *Epilepsy; oöphorectomy; no improvement after three years.*—E. B., aged thirty-two years, was an epileptic from puberty at thirteen years. Her periods recurred every four weeks, and lasted from four to six days; the quantity was normal; pain was moderate. Usually from four to ten convulsions occurred just before or during the flow, with *none in the intervals*. An aura was felt from the umbilicus to the head; the tongue was bitten; the shoulder was dislocated several times; total unconsciousness occurred, followed by sleep or stupor. During sixteen years there were at least three occasions when the menses were absent two or three months, when no convulsions occurred during the same interval. Indiscretions in diet would bring on attacks, but almost never except near a period. Examination revealed no pelvic disease; the labia minora were unusually large. Though not considered very hopeful, after long treatment by other measures and consultation with several physicians, total removal of the adnexa was performed in June, 1891. Aseptic recovery took place. No menses have been observed

since. For a year the convulsions were lessened in severity and frequency; but now, after three years, the woman is rather worse if anything. Her mind has continued to degenerate, and she has prolonged periods of hebetude. The effect on the self-abuse has not been learned.

Case IV. *Cirrhosis of left ovary; extreme pain; oöphorectomy; great improvement, lasting three years.*—E. T., aged fifty-two years, unmarried, was blind from childhood. A malignant tumor was removed from the right breast and axilla eight years previously by another surgeon. For four years prior to the celiotomy she had intense paroxysms of pain in the left ovarian region, almost daily, causing her to roll about the bed and moan or scream for hours. As other drugs failed, the morphin-habit was gradually acquired, and at the time of the operation her allowance was three grains daily. The pain was genuine and was much influenced by the approach of storms. After being under treatment with other measures for one year, celiotomy was performed. The left ovary was found to be exceedingly small, of the size of two white beans and very hard, though not calcified. It was removed, and there was uncomplicated recovery from the operation. No morphin was given from that date. The pain was very greatly relieved, and though the patient's surroundings remained the same, there was much improvement in weight and appearance. Now, three years later, attacks of pain are at times absent for months and are of mild character. The patient has never failed at every interview to express earnestly her gratitude for the operation and the relief it brought. She was seen well four days ago.

This case is unusual in that the operation was performed for *pain*. This is a deceptive indication, and very rarely by itself justifies abdominal operation.

Next follows an instance in which a pyosalpinx would partially empty itself at times, but for seventeen years

made the patient an invalid; complete cure was brought about by operation, lasting four years to date.

Case V. *Pyosalpinx.*—J. D., aged thirty years, menstruated just once at twelve years, when she immediately became illegitimately pregnant and acquired gonorrhea. She bore a child that is still living, but had an extremely difficult labor, complicated by pelvic inflammation and mammary abscess. She has never had good health since, *i. e.*, for seventeen years. There is always pain in the left side, and also attacks of bladder-derangement, with abdominal pain and soreness, which confine her to bed for weeks. Six years ago she was in bed nine weeks with pelvic inflammation, when there was a sudden gush of ill-smelling discharge. She is now just able to be out of bed, but at times severe paroxysms of pain in the abdomen make it impossible to straighten the body for hours. When operated upon she had been in bed about three months with symptoms of pelvic peritonitis. Examination showed a tense, very tender fluid mass to the left of the uterus and bulging into the rectum. A few days later there was a discharge of several ounces of horribly offensive fluid from the vagina, aptly described by the patient as like "old rotten egg that is red." Two days later the menses appeared. This discharge gave much relief, but as her years of invalidism had continued after previous discharges, celiotomy was performed, and with the greatest difficulty two tubal and ovarian masses, riddled with pus-pockets, were completely removed. Flushing and glass-drainage were employed; and excellent recovery followed. For this woman life began anew. For the first time in years she was without pain. There was rapid increase in weight, and for four years she has worked hard six days of every week, never ceasing to be grateful to the operator.

Case VI. *Retroversion with descent; torn sphincter; anterior fixation of uterus.*—Mrs. B. (sent by Dr. M. K. Elmer, of Bridgeton, N. J.), aged twenty-nine years,

had three children. Her sphincter was torn in labor two years ago, and she had no control of her bowels. Two attempts at repair at good hands in one of our large college-hospitals have greatly discouraged the patient by their failure. Complete success was obtained by a curved incision in front of the anus from one end of the torn sphincter to the other. The ends of the muscle were picked up by a strong catgut suture in a curved needle, and were brought together in front of the anus. The catgut was buried, and reinforcing wormgut sutures were *introduced afterward*. The result was permanent, and absolute control remains.

She had also adherent retroversion with salpingo-ovaritis, considered to be of a grade sufficient to render useless further attempts at cure without celiotomy. The uterus was stitched to the abdominal wall with silk. Twelve months later she reports great benefit from this operation, and freedom from pain, though obliged to do housework and nursing.

Case VII.—The interest in this case lies in the opportunity that it afforded to examine from within the abdomen an inguinal ring upon which an operation had been done for hernia ten years before. Dr. John Ashhurst had operated for strangulation. Though I am unable to learn that any special effort was made to obtain a radical cure, the hernia never recurred. Aside from the pelvic condition of an adherent, prolapsed, sacculated tube containing inspissated and hardened inflammatory material, for which I performed celiotomy, the patient complained of pain at the site of the old rupture when standing. The inguinal canal was found to be closed at the internal ring, but a diverticulum of peritoneum not more than an eighth of an inch in depth passed behind the internal pillar of the ring, and without doubt served to nip a portion of intruding bowel. The resulting pain was afterward largely controlled by a truss.

At the time of the celiotomy the woman presented the usual picture of chronic invalidism, with mingled neurotic and objective symptoms of old pelvic disease. Several months of previous treatment in the hands of her physician, Dr. M. K. Elmer, and in my own at the Methodist Hospital, yielded little result. The diseased tube and ovary on the left side were finally removed. Buried silkworm-gut sutures were introduced into the abdominal wound. She made an aseptic recovery, and reports, nine months later, great improvement in general health and strength, and no pain except at the site of the old inguinal hernia. She has been married eleven years, but is sterile.

Case VIII. *Tuberculosis of peritoneum; prolonged drainage without cure of disease.*—This patient came under my care, at the Presbyterian Hospital, for enormous ascites in August, 1892. She was forty-eight years old, unmarried, and had a tuberculous family history, the mother and sister presenting pulmonary tuberculosis, and nine brothers and sisters dying in infancy. Her illness began four months previously as a painless swelling of the abdomen, which had rapidly increased until the limit of distention had apparently been reached. She was emaciated, with a small pulse of 150, the stomach rejecting all but the smallest quantities of peptonized liquids. Vaginal examination without ether being impossible, rectal examination disclosed no apparent tumor, but a fixed uterus and small roughened masses on both sides. The extreme distention called for immediate relief. Celiotomy showed a condition of the visceral peritoneum which was considered at the time to be tuberculous, though the parietal peritoneum accessible for removal and examination was smooth and showed simply increased vascularity. The small intestine generally was hardened, stiffened, and contracted, its loops slightly adherent, except in the left half of the pelvis, where they were matted about a small, resonant enlargement which

appeared like a portion of the descending colon. There was no tumor at this time. The adhesions were rough, from a vast number of minute granules. The peritoneum over the small intestines in the left side of the pelvis was red and covered with minute elevations like granulation-tissue. The ovaries and tubes were buried in rough, cheesy adhesions.

The desperate condition of the patient precluded any attempt to separate and clear up the small mass of intestines, and drainage alone was given a chance at cure. Two months and a half later the fluid had again accumulated, and a second celiotomy was done with the object of removing any nidus of disease in the left side, and possibly resecting the colon. On removing the fluid, however, large new-growths were found choking the pelvis and absolutely sessile upon the anterior abdominal wall four inches above the pubis. A nodule, as large as a small egg, was seated on the wall above the umbilicus, and many were scattered through the omentum and mesentery. The operation was evidently hopeless, and the abdomen was again closed, and drainage provided for. The incision gave rise to no difficulty, and the patient continued fairly comfortable for about twelve months, being occasionally relieved of the ascites by aspiration, the quantity obtained varying from eight to fourteen pints. Emaciation was extreme, but there was no pain as from malignant disease. The woman died of facial erysipelas, seventeen months after the first operation and fourteen months after the second. The autopsy was performed by Dr. H. W. Cattell, who considered the large masses, adherent to the uterus, tubes, ovaries, and intestines, together with a cyst unknown origin containing several pints of fluid, to be tuberculous. The specimen was shown by a resident physician, Dr. Swan, at the Pathological Society, and unfortunately lost, though referred to a special committee for examination.

The prolonged drainage of tuberculous disease of the

abdomen is only curative when the disease does not involve the parenchyma of organs and is confined to the peritoneum. One such case under my own observation is apparently entirely well five and a half years after drainage by celiotomy.[1]

Radical operative treatment is demanded in some cases because the hernial sac is largely buried in the superficial fat, and a belt or truss has no chance to reach the orifice of exit through the fascia and muscles. In the following case, in a laboring-woman, mechanical retention of the hernia was impossible.

Case IX. *Umbilical hernia in the obese.*—Mrs. C. was subject to attacks of pain and nausea from an umbilical hernia of spontaneous origin. The tumor was largely made up of irreducible omentum, and was contained in a very irregular sac, with numerous prolongations into the abdominal fat. The patient was very short and exceedingly obese. The adherent omentum was tied off and removed. The sac was dissected out completely, and the deep fascia and muscles were united by buried silkworm-gut sutures, four to the inch, and these were allowed to remain permanently. The skin and superficial fat were separately sutured. The woman made an uncomplicated operation-recovery, the wound being aseptic. Six months later the hernia had not recurred.

Case X. *Adhesion of small intestine following celiotomy.*—M. D., twenty-six years, had both tubes and ovaries removed by a well-known operator one year before coming under observation. She had since been in different hospitals and in a home for convalescents, complaining of abdominal pain. This pain frequently caused nausea and vomiting, always preceded a stool, and was excited by the movement of intestinal gas. It was frequently referred to the umbilicus, and was considered to be of

[1] Trans. Philadelphia County Medical Society, 1894.

intestinal origin. Celiotomy in the Trendelenburg position disclosed two points of adhesion of the small intestine, one near the old incision, the other to an ovarian and tubal stump. The latter was freed with the scissors, and the bowel-wall stitched with silk, aseptic recovery following, though there was some vomiting late in the convalescence. One year later the patient was seen and declared herself cured. She had had no more pain, and had been working instead of leading the life of a hospital-inmate as before. Post-operative adhesions are best prevented by clean surgery and by the avoidance of constipation afterward.